



NORTH DAKOTA FIELD OFFICE

FIRE MANAGEMENT PLAN

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Bureau of Land Management
North Dakota Field Office
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ACRONYMS

ACEC	Areas of Environmental Concern
AMR	Appropriate Management Response
AWP	Annual Work Plan
BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
BOR	Bureau of Reclamation
CFR	Code of Federal Regulations
DM	Departmental Manual
DOI	Department of Interior
ESR	Emergency Stabilization and Rehabilitation
FIL	Fire Intensity Level
FLPMA	Federal Land Management and Policy Act of 1976
FMP	Fire Management Plan
FMU	Fire Management Unit
FRCC	Fire Regime Condition Class
FWFMP	Federal Wildland Fire Management Policy
GIS	Geographical Information System
HFR	Historic Fire Regime
IIAA	Interagency Initial Attack Assessment
LAU	Lynx Assessment Unit
MCFO	Miles City Field Office
MIS	Management Information System
NAGPRA	Native American Graves Protection and Repatriation Act
NEPA	National Environmental Policy Act
NFDRS	National Fire Danger Rating System
NFMAS	National Fire Management Analysis System
NHPA	National Historic Preservation Act of 1966
NWCG	National Wildfire Coordinating Group
NYR	Normal Year Readiness
OHV	Off Highway Vehicle
PCHA	Personal Computer Historical Analysis
PFC	Proper Functioning Condition
PNVG	Potential Natural Vegetation Groups
RAMS	Risk Assessment and Mitigation Strategies Plan
RAWS	Remote Automated Weather System (Station)
RIPS	Range Improvement Project System
RMP	Range Management Plan
ROD	Record of Decision
RPZs	Riparian Protection Zones
SDFO	South Dakota Field Office

SEAT	Single Engine Air Tanker
SHPO	State Historic Preservation Office
SMA	Special Management Area
SMZ	Stramside Management Zone
SSS	Special Status Species
UAM	Unit Aviation Manager
USC	United States Codes
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
USDI	United States Department of Interior
VRM	Visual resource management
WSA	Wilderness Study Area
WUI	Wildland Urban Interface

I. INTRODUCTION

The North Dakota Field Office (NDFO) manages 59,563 acres of federal land. Land patterns are scattered parcels with the exception of Lost Bridge Management Area which has 15,000 acres in Dunn County, the Big Gumbo Management Area with 20,000 acres in Bowman County and 2,000 acres at the Schnell Recreation Area in Stark County. Policy for the fire management developed as a result of the Federal Wildland Fire Management Policy (FWFMP) and Program Review (1995, 2000), National Fire Plan (2000) and the Federal Fire Policy (2001). Policy directs that agencies develop an approved fire management plan (FMP) for every area with burnable vegetation (see map on following page). FMPs are strategic documents that define a program to manage wildland and prescribed fires based on the area's approved land management plan. FMPs must provide:

- Firefighter and public safety
- Include fire management strategies, tactics, and alternatives
- Address values to be protected and public health issues
- Be consistent with the resource management objectives, activities of the area, and environmental laws and regulations.

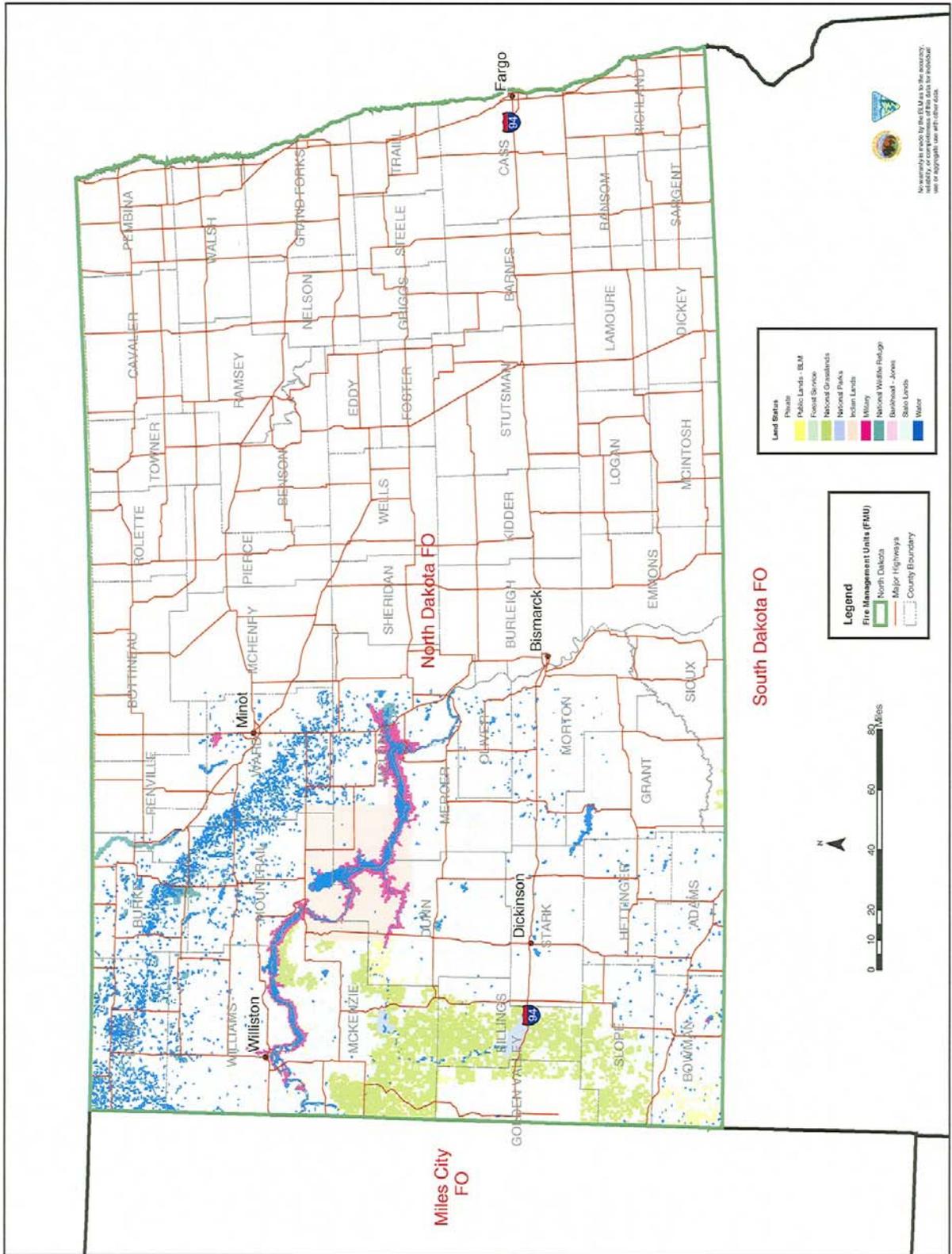
A. Purpose

The purpose of the Bureau of Land Management (BLM) NDFO FMP is to identify and integrate all wildland fire management guidance, direction, and activities required to implement national fire policy and fire management direction from the North Dakota Resource Management Plan (RMP). Overall direction from the RMP and associated implementation plan allows fire to be restored as an integral part of ecosystems to meet resource management objectives and to improve protection of human life and property through the reduction of hazardous fuels. The FMP allows management direction to be easily accessible by fire and resource personnel. It highlights management direction to facilitate development and implementation of fire management strategies. A glossary of terms is provided at the end of this document to assist in clarifying technical terms.

B. Relationship to Environmental Compliance

The NDFO fire management is derived from decisions made through North Dakota RMP, the North Dakota RMP desk document, and the Fire/Fuels Management Plan Environmental Assessment (EA) Plan Amendment for Montana and the Dakotas. The FMP receives additional guidance from Record of Decision (ROD); Standards for Rangeland Health and Guidelines for Livestock Grazing Management for Montana, North Dakota and South Dakota; and the Activity Plan and EA for the Schnell Recreation Area. The NDFO FMP also meets regulatory compliance requirements with the National Environmental Policy Act (NEPA) as it is a strategic document that does not make resource management decisions or project specific implementation decisions and therefore is categorically excluded from further NEPA analysis (Categorical Exclusion 516 Department Manual (DM) 2, Appendix 1, Chapter 2, 1.10). Prior to implementing fire management projects on-the-ground, additional environmental analysis and compliance with other federal and state regulatory requirements such as the National Historic Preservation Act (NHPA) and the Endangered Species Act, the Clean Water Act and the Clean Air Act will be required.

Map 1. Map of NDFO



C. Collaboration

The NDFO FMP is a strategic document identifying approved fire management direction determined by the RMP and analyzed in the final environmental impact statement for that plan. This RMP was developed with input from and consultation with representatives from the Bureau of Indian Affairs (BIA), United States Fish and Wildlife Service (USFWS), United States Forest Service (USFS), the State of North Dakota, and interested citizens. The NDFO FMP meets the national requirement that all BLM administered lands subject to wildland fires are managed under a current FMP.

D. Authorities

Authorities for the development of the NDFO FMP are listed below:

- Protection Act of September 20, 1922 (42 Stat. 857; U.S.C. 594).
- Taylor Grazing Act of June 28, 1934 (48 Stat. 1269; U.S.C. 315).
- Reciprocal Fire Protection Act of May 27, 1955(69 Stat. 66; 42 U.S.C. 1856, 1856a).
- Economy Act of June 30, 1932 (47 Stat. 417; 31 U.S.C. 686).
- The Federal Land Management and Policy Act (FLPMA) of 1976 (Public Law 94-579; 43 U.S.C. 1701).
- Disaster Relief Act, Section 417 (Public Law 93-288).
- Annual Appropriations Acts for the Department of the Interior.
- United States Department of the Interior Manual (910 DM 1.3).
- 1995 Federal Wildland Fire Management Policy.
- 2001 Updated Federal Wildland Fire Management Policy (1995 Federal Wildland Fire Management Policy Update).
- 1998 DM 620 Chapter 1, Wildland Fire Management General Policy and Procedures.

II. Relationship to Land Management Planning/Fire Policy

The NDFO FMP is derived through decisions contained in the North Dakota RMP, RMP desk document and the Activity Plan and EA for the Schnell Recreation Area. The NDFO FMP provides fire managers guidance for implementing RMP fire related direction on-the-ground.

The NDFO FMP derives overall program guidance from the following:

- 1998 BLM Handbook 9214, “Prescribed Fire Management” describes authority and policy for prescribed fire use on public lands administered by the Bureau of Land Management.
- September 2000, “Managing the Impacts of Wildfires on Communities and the Environment.”
- October 2000, National Cohesive Strategy goal is to coordinate an aggressive, collaborative approach to reduce the threat of wildland fire to communities and to restore and maintain land health www.fireplan.gov.
- August 2001, “Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment -10 Year Comprehensive Strategy” provides a foundation for wildland agencies to work closely with all levels of government, tribes, conservation, and commodity groups and community-based restoration groups to reduce wildland fire risk to communities and the environment.
- May 2002, “Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment, 10 Year Comprehensive Strategy – Implementation Plan.”
- August 2002, “Healthy Forests - An Initiative for Wildfire Prevention and Stronger Communities.”
- Activity Plan and Environmental Assessment for the Schnell Recreation Area, 1996.
- 2003 Off Highway Vehicle (OHV) Management Amendment
- 1997 Standards for Rangeland Health and Guidelines for Grazing Management
- North Dakota Range Management Plan (1988).
- Fire/Fuels Management Plan, Environmental Assessment/Plan amendment for Montana and The Dakotas, 2003.

A. Goals Related to Fire and Fuels Management from the RMP

Wildland fire management activities within the NDFO will assist in meeting the following management goals, standards, and guidelines from the following plans: North Dakota RMP, Activity Plan and EA for the Schnell Recreation Area.

- The highest priority in fire management is the protection of human life, both the public and firefighters.
- To protect human communities, their infrastructure, and the natural resources on which they depend. Other property and improvements will be protected.
- Protect riparian and wetland areas in properly functioning condition (PFC) and improve degraded vegetation for long-term health.
- Protect sensitive areas from fire intrusion.
- Maintain air quality to meet or exceed applicable federal and state standards and regulations.
- Reduce fire risk to Wildland Urban Interface (WUI) communities.
- Manage habitat for healthy and balanced populations of sage grouse and other species of native wildlife.
- Manage the habitat for threatened and endangered species of plants and animals to keep viable populations in their natural ecosystems.
- Managing grazing, riparian areas and wildlife habitat to restore and maintain the structures, species composition, and processes of native ecological communities and existing ecosystems of this EcoZone.
- Promote greater diversity within plant communities of the NDFO with the use of fire.
- Manage lands treatments to conserve site moisture and to protect long-term stream health from damage from increased runoff.
- Use fire as a management tool to improve the ecological condition of the NDFO.
- Employ fire prevention strategies that reduce human ignition occurrence in campgrounds and transportation corridors.

The setting of priorities among human communities and community infrastructure, other property and improvements, and natural and cultural resources will be based on the values to be protected, human health and safety, and the costs of protection. Once personnel have been committed to an incident, these human resources become the highest value to be protected.

III. Wildland Fire Management Strategies

A. General Management Considerations

In order to comply with direction provided in current National Fire Plan guidance, the North Dakota RMP, Activity Plan and EA for the Schnell Recreation Area, the NDFO developed the following general wildland fire management guidance. The NDFO will:

- Use fire to restore and/or sustain ecosystem health based on sound scientific principles and information, balanced with other societal goals, including public health and safety, and air quality.
- Identify appropriate management response (AMR) goals, objectives, and constraints within the NDFO. All wildland fire management activities will be managed as described in the Fire Management Unit (FMU) guidance outlined in section III.
- Provide an AMR on all wildland fires, with emphasis on minimizing suppression costs, considering fire fighter and public safety, benefits and values to be protected consistent with resource objectives, standards and guidelines.
- Meet management goals and objectives through the use of prescribed fire, mechanical treatment, wildland fire for resource benefit, chemical treatment, biological treatment, and cultural treatment.
- Work collaboratively with federal, state, and local partners to develop cross boundary management strategies and prioritize cross agency fire management actions.

B. Wildland Fire Management Goals

The NDFO will conduct all wildland fire management actions in compliance with the 1995 Federal Wildland Fire Policy and the 2001 Federal Wildland Fire Policy Update guiding principles. These principles are:

- Firefighter and public safety are the highest priority in every fire management activity.
- Assess risk to communities in terms of direct wildland fire impact and economic values, and implement effective programs to mitigate that risk through collaborative planning and projects.
- Implement the full range of wildland fire and fuels management practices, including prescribed fire, mechanical, chemical, and biological treatments that will move all affected landscapes toward desired future condition as described in the RMP.
- Establish partnerships with all interagency cooperators to facilitate coordinated fire management activities.

- Maintain an efficient and effective organization for the suppression of wildland fires consistent with the values at risk.
- Encourage close coordination and collaboration among specialists within the NDFO and among the Montana State Office, other federal agencies, interested organizations, private landowners, state, and local partners.
- Develop and use the best scientific information available to deliver technical and community assistance to support ecological, economic, and social sustainability.
- Create an integrated approach to fire and resource management.
- Specific fire programmatic direction within the NDFO is outlined in chapter III, section D of this FMP.

C. Wildland Fire Management Options

The NDFO does not have initial attack suppression resources. Suppression is contracted with five different fire departments. The five departments are West Dunn Rural Fire Department, Marmarth Volunteer Fire Department, Rhame Volunteer Fire Department, McKenzie County Rural Fire Department, and Richardton Rural Fire Department. Fire is not desired due to large amounts of private land and rural subdivisions that are adjacent to the scattered parcels of Public Lands. Upon receiving a fire report fire departments will:

- Dispatch fire equipment and personnel from its fire department for the purpose of initial attack in fighting the fire.
- The departments will notify the Field Manager or their representative.
- The NDFO will send a representative to the scene of the fire. NDFO will provide oversight to incorporate AMR on all wildland fires, with emphasis on minimizing suppression costs, considering fire fighter and public safety, benefits and values to be protected consistent with resource objectives, standards and guidelines.

The use of AMR will allow land managers to tailor wildland fire responses to meet objectives established in resource management plans and their associated implementation plans. The FMU category is as follows:

- **Category “B”**- FMUs are areas where unplanned wildland fires is not desired and likely to cause negative effects because if current conditions.

Wildland Fire Use

The North Dakota RMP has no provision for wildland fire use. Management actions are to control wildfire on public lands.

D. Description of Wildland Fire Management Strategies by FMU

The FMP establishes geographic areas as FMUs. In this section, the FMP establishes prescriptive criteria and other guidance, which provide additional direction to allow managers to implement the objectives of the RMPs and activity-level plans for each FMU.

Only one FMU was identified for NDFO. The following sections contain a description of this FMU stating fire management objectives, constraints, and planned actions for that FMU:

1. B1 North Dakota Field Office

Location: The FMU encompasses 59,563 acres of BLM administered public land in the state of North Dakota. The NDFO generally has a scattered land pattern with about 56 percent of this land being located in Bowman County; 26 percent in Dunn County; with the balance found in mostly scattered parcels ranging from 2 to about 2,000 acres in size in 23 other counties. Jurisdictional agencies that manage lands adjoining the NDFO are: BLM, BIA, National Park Service (NPS), Army Corp of Engineers, USFS, several county boundaries and State of North Dakota.

Characteristics: The vegetation consists of grass and grass-shrub, riparian woody draws, scattered Rocky Mountain Juniper with a limited area of Ponderosa Pine, arid to semi-arid mixed grass prairie, scattered sage brush.

The BLM lands in the northern Dunn County are typical badlands terrain ranging in elevation from 1,875 to 2,540 feet. Slopes can range from less than 20 percent to near vertical. The Little Missouri River flows through this area forming the badlands topography. Bowman County consists of gentle to rolling hills with elevations ranging from 2,780 to 3,100 feet. Slopes range from 3 to 20 percent. Schnell Recreation Area consists of gentle to moderate rolling grasslands with steep vegetated hills. Semi steep riparian draws or coulees transect the property in a general northwesterly to southeasterly direction.

The majority of this FMU is accessed by a road network suitable for two wheel drive vehicle traffic. There are several two-track roads scattered throughout this FMU that are only suitable for four wheel drive vehicle. Road access is very good with several bladed roads and one all weather road in the Big Gumbo Area. Dispersed recreation takes place throughout the area. No motorized vehicles are allowed in the Schnell Recreation Area with the exception of designated areas in the campground and headquarters. The only access road is the road into the campground and driveway into the headquarters.

Fire History: There has been one reported wildland fire on BLM public lands in North Dakota during the past 20 years. This fire burned ½ acre in the Schnell Campground. The fire was suppressed by the Richardton Rural Fire Protection District. Table 1 represents FRCC based upon local knowledge and professional judgment. This table will be updated as more information is gathered in the field.

Table 1. Fire Regime/Condition Class (FRCC):

The Standard Landscape Method will be applied to verify the characteristics of FRCC for the North Dakota Field Office FMU, per direction in the *Interagency Fire Regime Condition Class Guidebook* (Hann et al., 2002). Two potential natural vegetation groups (PNVGs) make up the North Dakota Field Office FMU: (1) Prairie Grasslands; (2) Juniper Steppe.

North Dakota Field Office FMU				
PNVG	Historic Fire Regime	Condition Class	Acres	% of FMU
PRAR1	II	II	53,550	90
JUST1	III	II	5,950	10

The Plains Grasslands is in Condition Class 2, corresponding to moderate levels of departure as a result of fire exclusion, development and grazing. Potential FRCC changes in these strata will require mitigation of social and political concerns.

The Juniper Steppe strata are in Condition Class 2, based upon moderate departure in vegetation structure and composition. In this PNVG, advanced succession, and urbanization have contributed to degraded vegetation conditions which correspond to moderate ecological departure.

Values at Risk: Forage for livestock, oil and gas developments, recreation opportunities and improvements, sage grouse, big game summer range, upland bird habitat, water quality, sensitive soils and plants. A fire starting on BLM public lands could burn onto cropland and cause a loss of that commodity. Wildfire could endanger members of the public on BLM's 2,000 acre Schnell Recreation Area. Wildland fire will result in loss of wildlife habitat, especially in woody draws.

Communities at Risk: The primary interface of any type would be between the public lands and oil and gas wells and facilities locations. Even at those locations the companies have taken into account the possibility of fire and prepared the sites to prevent losses from prairie fires. Sites are cleared of vegetation and covered with gravel or scoria. Measures are taken to keep invasive weeds and grasses off the locations, thus eliminating fuel supplies. There also would be a small amount of interface between private cropland and BLM rangeland.

Fire Management Objectives: Fire is not desired in North Dakota because of the large amount of private land and the relatively small isolated parcels of public land. Appropriate management response to most wildland fires in North Dakota would be aggressive fire suppression. Although the North Dakota RMP does not allow for fire use it does state "allows fire to play a natural role in the ecology of vegetation communities on public lands insofar as life, property, or private resources are not threatened." The final Activity Plan and EA for the Schnell Recreation Area states: "Provide for prevention and control of wildfire on the property." Prescribed fire and other fuels management activities may be used to reduce fuels buildup and to avoid or mitigate the effects of potential wildland fire.

Fire Management Strategy: Fire occurrence in this FMU is very low. Human-caused ignition is the primary cause of wildland fires. No more than 10 percent of the NDFO will be

burned over a 10 year period. Priority for implementing AMR is to prevent wildland fires from spreading to private and other adjacent lands. All fires occurring at Fire Intensity Level (FIL) 1-3 will be suppressed at <100 acres 90 percent of the time. All fires occurring at FIL 4-6 will be suppressed 50 acres or less 85 percent of the time.

Once the decadal burn target of 5,956 acres for the field office has been reached from planned or unplanned ignitions, a review of the objectives and strategies will be initiated to develop new suppression criteria on all wildland fires. Consistent with the Bureau's 9200 manual and guided by the Interagency Standards for Fire and Fire Aviation Operations 2004 the NDFO will:

- Control wildfires on public lands
- Maintain cooperative agreements with county governments where necessary for the control of fires on public lands.
- Prepare prescribed burn plans for vegetative manipulation where appropriate.
- Collaboratively work with county governments, permittees, and adjacent landowners in the development and implementation of fuels management projects.
- Ensure that prescribed burn plans are in accordance to the Bureau's 9214 manual.

Management Constraints: Initial attack/suppression tactics will be restricted to the use of fire engines and handlines using handtools. Any use of heavy equipment (e.g. chain saws, dozers, etc.) will be by the approval of the NDFO Field Manager or their representative.

- Although the Pallid Sturgeon does exist in North Dakota within the Missouri River system, it is highly unlikely the pallid exists within the Little Missouri River. Fire effects and suppression tactics should have minimal or zero impacts on this species.
- Western Prairie Fringed Orchid occurs in North Dakota but is limited to two counties in the eastern part of the state. The plant has not been documented west of the Missouri River in North Dakota. It is highly unlikely to be effected by BLM fire activities.

Review Appendix D section 2.5.3.1 29,30,33,34 to determine which management constraints would apply to this FMU.

IV. Fire Management Components

The NDFO contracts all suppression of fires on federal lands. Support for prevention, training, and prescribed fire is through the Miles City Field Office (MCFO).

A. Wildland Fire Suppression

The NDFO FMP is based on the concept that all wildland fires will be subject to an initial response (Initial Action). Copies of the FMP outlining constraints and management objectives will make available to cooperators who provide suppression services.

The NDFO manages fire suppression through five different agreements to local fire departments. Use AMR to suppress all fires in accordance with management objectives based on current conditions and fire location. For the NDFO, AMR response will be aggressive initial action.

1. Fire Planning Unit History

Historically there has been very little fire occurrence. In the twenty year analysis period, personal computer historical analysis (PCHA) shows only one fire for one-half acre. The local fire departments, permittees, contractors, and local residents have been known to suppress fires on federal lands. The recordkeeping for their suppression efforts is not detailed or required by some fire departments. The NDFO would have to perform an extensive search to achieve a confidence level on the fire reporting. Typically fire season starts in late April and ends in September.

2. Suppression/Preparedness Actions

All wildland fires will be suppressed according to the agreements. Aggressive initial attack strategy is the AMR in this FMU. Required fire operations/suppression plans can be found in “Interagency Standards for Fire and Fire Aviation Operations 2004” (Red Book) and the Office of Fire and Fire Aviation website at <http://www.fire.blm.gov/>. All NDFO plans for fire and resource personnel use are located in the NDFO library and the Miles City Interagency Dispatch Center. Fires are reported through the appropriate County 911 dispatch center.

Agencies will ensure their capability to provide safe, cost-effective fire management programs in support of land and resource management plans through appropriate planning, staffing, training, equipment, and management oversight.

The operational roles of federal agencies as partners in the WUI are wildland firefighting, hazardous fuels reduction, cooperative prevention and education, and technical assistance. Structural fire suppression is the responsibility of tribal, state, or local governments. Federal agencies may assist with exterior structural protection activities under a formal Fire Protection Agreement that specifies the mutual responsibilities of the partners, including funding.

3. Fire Prevention, Community Education, Community Risk Assessment, and Other Community Assistance Activities.

a. Prevention Program

Prevention is an active part of the NDFO fire management program. The prevention program is interagency. Goals for the prevention program are to reduce the number of human-caused fires, education of other agencies and public in the use of fire for resource benefits, hazard fuel reductions and WUI's. Details of the prevention program may be found in the MCFO Wildland Fire Prevention Plan, available at the Miles City Interagency Dispatch Center.

The NDFO receives one work month per year for prevention. The MCFO and the Montana State Office fire education and mitigation specialists provide support to the NDFO. Prevention materials are available at the MCFO. No funding is provided for prevention materials. Community risks assessments and mitigation activities are conducted by the local fire departments yearly.

b. Special Orders and Closures

The NDFO follows the North Dakota Range Land Fire Index. This fire index is based on fuels, and weather factors. The State Forestry Service with input from other agencies recommends special orders and closures. The Governor of North Dakota will issue a proclamation for closure.

c. Industrial Operations and Fire Precautions

All operators and contractors currently clear the vegetation around their area of operation.

4. Fire Training

Training and fitness requirements for all personnel involved in fire management activities can be found in the Interagency Standards for Fire and Fire Aviation Operations 2004, Chapter 14, section 14-3, and the National Wildfire Coordinating Group (NWCG) Wildland and Prescribed Fire Qualification System Guide PMS 310-1. NDFO currently has no training budget. Fire training for personnel in the NDFO is supported by the MCFO. Fire training is coordinated with the MCFO Training Coordinator. Fire line refresher is completed every year prior to June 1.

5. Detection

Detection is generally provided by landowner, private citizens reporting fires through the local 911 system. USFS provides ground resources for patrol of the National Grasslands. Fixed wing flights are available through the Miles City Interagency Dispatch Center, Aviation Desk. All detection flights will originate from Miles City.

6. Fire Weather and Fire Danger

There are two Remote Automated Weather System (RAWS) stations in North Dakota. Currently NDFO has no Fire Danger Rating Plan for their area. The Miles City Field Office is developing a Fire Danger Rating Plan which will include the NDFO. This plan will be completed before fire season of 2005.

Table 2. Remote Automated Weather System (RAWS) Stations

Name	NWS Station I.D.	Location	Elevation	Latitude	Longitude
Watford City	321703	McKenzie Co.	2,165	47 46.49	103 17.12
Sand Creek	323804	Slope Co.	2,700	46 32.44	103 31.06

* degrees, minutes, seconds (dms)

7. Aviation Management

The Unit Aviation Manager (UAM) is located in the MCFO and prepares and reviews aviation plans for the NDFO. Non-tactical resource aviation management is coordinated through the UAM. Aviation operations within the boundaries of the NDFO for tactical

missions are under the operational control of the volunteer fire departments and the North Dakota Dispatch Center.

8. Initial Attack

Initial attack is performed by the five different fire departments through existing agreements.

B. Wildland Fire Use

All responses to wildland fire will comply with the North Dakota RMP, the Activity Plan and EA for the Schnell Recreation Area. All management constraints can be found in the five fire agreements. Currently there are no provisions in the North Dakota RMP to allow fire use for resource benefits.

C. Prescribed Fire

There are no immediate plans to implement prescribe fire in the NDFO. Several reasons exist why no plans have been developed. The field office does not have a prescribe fire specialist on staff. All prescribed fire support comes from MCFO or South Dakota Field Office (SDFO). Currently these two programs are engaged in full activities and generally do not have the time to commit for projects in North Dakota. Due to the scattered land patterns developing and completing a prescribe fire project would involve coordination with different agencies, private landowners, local governments and permittees. Agency public affairs staff will prepare pre/post project news releases. Coordination would be required with the field office for any fuels management projects.

The NDFO will retain the following documentation for all prescribed fire projects:

- Prescribed fire plan including all attachments.
- A copy of the NEPA documents.
- Maps and photos pre and post burn.
- Agreements.
- Prescribed fire report go/no go checklist, briefing checklist and test fire documentation.
- All weather forecast information including observations, field moistures, and unit logs,
- Prescribed fire reported into National Fire Plan Operations Reporting System (NFPORS).
- Resource monitoring reports and post-incident evaluation.

- Financial documents including cost information. A Management Information System (MIS) should be included.
- Names and locations of pertinent geographical information system (GIS) files.
- All required personnel for fuels management projects must meet the requirements for the position according to Bureau's policies and the NWCG 310-1 guide

1. Planning and Documentation The 1998 BLM Handbook 9214 "Prescribed Fire Manual" provides specific guidance for the prescribed fire program. It covers guidance, planning, prescribed fire plan requirements, determination complexity, safety and qualifications, project finance, cooperation and assistance, escape fires, and reporting. All prescribed fire planning efforts must go through cultural (section 106) and paleontological clearance before implementation of the proposed project. All specific prescribed fire plans would include pre/post project criteria. For specific action items refer to the individual project plans.

FMPs and programs will be based on a foundation of sound science. Research will support ongoing efforts to increase our scientific knowledge of biological, physical and sociological factors. Information needed to support fire management will be developed through an integrated interagency fire science programs. Scientific results must be made available to managers in a timely manner and must be used in the development of land management plans, fire management plans, and implementation plans.

The NDFO prescribed fire program would be implemented on an interagency basis to treat natural fuel accumulations to meet resource management objectives, standards and guidelines as outlined in the RMP and Schnell Recreation Area activity plan. (See DM 9214 Prescribed Fire Handbook).

Project level analysis would go through the NEPA process and other state and federal regulatory compliance processes document the purpose and need for treatment would identify the goals and objectives that the prescribed fire treatment is intended to realize.

Project level reporting requirements have been established and include submissions in Rangeland Improvement Project System (RIPS), Annual Work Plan (AWP), Management Information System (MIS), and National Fire Plan Operations Reporting System (NFPORS).

Documentation requirements including weather, monitoring, and project notes are completed or reviewed by the project manager. For information on the requirements refer to the individual project plans.

Only qualified personnel will participate in the implementation of prescribed fire and fuels implementation projects. A list of qualified personal is available in the Miles City Interagency Dispatch Center.

NDFO currently can not address a long-term prescribe fire program. The NDFO plans to continue annual treatment of invasive plant species. Prescription requirements are site and project specific. See specific project plans for detailed information.

NDFO will provide appropriate coordination with agency public affairs staff to prepare pre-season news releases. Provide appropriate coordination with key agency staff focusing on special use permittees, recreationists and publics or communities that would be potentially affected by a wildland fire incident.

2. Air Quality and Smoke Management

BLM manual sections 9211.31 (E), Fire Planning, and 9214.33 Prescribed Fire Management require compliance with individual state and local smoke management programs.

D. Non-fire Fuels Treatments

The NDFO is involved with biological, chemical and mechanical treatment for the removal of non-native, invasive weeds. Currently 300 acres per year are treated with plans to maintain that level or to increase the level of treatment depending on the amount of land mass that is being encroached by invasive plant species.

Annual activities required prior to designating and managing fuels projects for resource benefit will include:

- Compliance with BLM Manual Sections 9211.31 (E), Fire Planning, and 9214.33, Prescribed Fire Management.
- Internal coordination with staff members.
- Compliance with 9015 Integrated Weed Management.

The NDFO develops out-year program planning and budgeting information for treatments in accordance with the RMP and the Schnell Recreation Area activity plan.

The development of treatment proposals is typically accomplished one to three years in advance of planned treatments. Field reconnaissance and interdisciplinary analysis are completed one to two years in advance of project implementation.

All specific non-fire fuels treatment project plans include pre/post project criteria. For specific action items refer to each individual project plan.

Equipment and seasonal use restrictions are identified in the North Dakota RMP and Appendix A. Specific project area restrictions are located in the project plans. For information on the restrictions refer to the individual project plans. All non-fire fuel treatments will comply with the equipment and seasonal use restrictions identified and described in chapter III, section D of this FMP.

Monitoring requirements are developed in response to resource management and project objectives from interdisciplinary input. For information on the requirements refer to the individual project plans.

E. Emergency Stabilization and Rehabilitation

NDFO would implement the Interagency Burned Area Emergency Stabilization and Rehabilitation (ESR) Handbook for all burned area rehabilitation.

The NDFO stabilization and rehabilitation program is would be undertaken to prevent further and unacceptable resource damage from soil erosion due to the effects of wildland fire. For information see the BLM supplemental ESR guidance. This supplement provides specific BLM guidance and is tiered to the 2002 Department of Interior (DOI) ESR Handbook (<http://fire.r9.fws.gov/ifcc/esr/handbook/>) relative to planning and implementing ESR projects on public lands administered by the BLM. Treatment activities must conform to the BLM supplemental ESR guidance, the RMP, and the Normal Year Fire (NYR) Stabilization and Rehabilitation Plan.

Emergency rehabilitation needs would be established in a wildland fire rehabilitation plan. Rehabilitation and restoration efforts would be undertaken to protect and sustain ecosystems, public health and safety, and to help communities protect infrastructure. The NDFO would develop program planning and budgeting information for rehabilitation treatments in accordance with the resource area plan and the Schnell Recreation Area activity plan.

Short-term monitoring requirements include evaluation of the application methodology immediately upon completion of application. Post-treatment monitoring may include vegetative transects or establishing permanent photo points depending on the specific project objectives.

Resource specialists and fire management staff with GIS specialist support would conduct long-term monitoring at the field office level.

F. Community Protection/Community Assistance

There are no communities at risk (CAR) in or around BLM land. The NDFO is not coordinating with any agencies or public groups for community protection plans.

V. Organization and Budget

A. Budget and Organization

NDFO currently does not have its own fire organization or the budget to have a fire organization. Currently the budget for North Dakota is combined with MCFO National Fire Management Analysis System (NFMAS) and is not broken out into the field offices within the Eastern Montana Fire Zone.

NDFO receives limited support from the MCFO. NDFO could further a prescribed fire program and mitigation program if the field office had one fire management specialist and subsequently the budget to be able to initiate and complete projects.

All budget requests are based on projected workloads. Under the organization described, the NDFO/zoned fire staff requires the following staff, equipment, and funding to accomplish the program goals and objectives:

TABLE 3. NDFO Fire Zone Requirements for Program Goals and Objectives

Resource	Current Staffing	Desired Staffing	Normal Activation	Sub Activity	Cost
Fire Management Specialist	0	1	Yearly		\$

The Eastern Montana Fire Zone fire management program provides suppression (initial and extended attack), investigation, prevention and education, and fuels management services for public lands that lie within the field office. National support is provided when requested resources or personnel are available.

Fire occurrence for the NDFO can be found in the Interagency Initial Attack Assessment (IIAA) analysis. Workload has been determined to be one human-caused wildland fire for the NDFO per decade. North Dakota has a split fire season. The spring fire season starts in April and continues to mid-May, and the summer season starts mid-July and continues to the end of September.

Agency administrators will ensure that their employees are trained, certified, and made available to participate in the wildland fire program locally, regionally, and nationally as the situation demands. Employees with operational, administrative, or other skills will support the wildland fire program as necessary. Agency administrators are responsible and will be held accountable for making employees available.

B. Assistance Agreements and Intra/Interagency Agreements

Original copies of USCs applicable to wildland fire are provided in “A Reference Guide to Principal Wildland Fire Laws for the Bureau of Land Management.”

Copies of the Federal Interagency Agreement for Fire Management are kept at the BLM-Office of Fire and Aviation’s Procurement Office.

Copies of assistance agreements are kept at the BLM Montana State Office.

Cooperative fire management agreements exist between the BLM and the following agencies:

1. National Weather Service

Interagency Fire Management (2000), interagency agreement for weather service assistance during prescribed fires and regular fire season. The Miles City Interagency Dispatch Center has a copy.

C. Equipment Rental Agreements

The Emergency Equipment Rental Agreements (EERAs) are in a Service and Supply Plan at the Miles City Interagency Dispatch Center.

D. Contract Suppression and Prescribed Fire Resources

NDFO has five agreements for wildland fire suppression on federal lands. The agreements are in the Service and Supply Plans at Miles City Interagency Dispatch Center.

1. West Dunn Volunteer Fire Department, the expiration date of this agreement is 4/1/2006.
2. Marmarth Volunteer Fire Department, the expiration date of this agreement is 4/1/2006.
3. Rhame Volunteer Fire Department, the expiration date of this agreement is 4/1/2006.
4. McKenzie County Rural Fire Department, the expiration date of this agreement is 4/1/2006.
5. Richardton Rural Fire Department, the expiration date of this agreement is 4/1/2006.

VI. Monitoring and Evaluation

The NDFO FMP is a working reference for wildland fire management and hazardous fuels treatments within the NDFO. It will be reviewed annually and revised as needed to ensure that the strategic guidance provided in the plan is assisting the NDFO in meeting its resource management and fire management goals and objectives in the North Dakota RMP, Schnell Recreation Area activity plan. Revisions, additions, and adjustments that are compliant with the RMP may be incorporated into the FMP.

Any major changes may require amending the RMP. The review will also ensure that the fire program is being implemented in a safe, cost effective manner and as directed in this fire management plan. As national wildland fire performance measures are issued, monitoring and evaluation protocols will be developed to meet those requirements and follow Department and Bureau guidelines.

Monitoring for each project is described in the project level plan for short term and long term objectives. Photo points and plots are established where needed depending on project specific objectives.

GLOSSARY

affected environment - The natural environment that exists at the present time in an area being analyzed.

aircraft rental agreement - Obtains aircraft for aerial missions under operational control of the BLM. The DOI-Aviation Management Directorate regionally administrates aircraft rental agreements for type III helicopters and fixed wing aircraft. There is a web based source list maintained by Aviation Management Directorate and typically this procurement mechanism is for short time duration and may be ordered direct by the local dispatch unit to the vendor.

annual work plan - Written plan which delineates specific functions which must be accomplished by specific deadlines, who is responsible for accomplishing how the task will be completed and what is needed to complete the task.

appropriate management response - Specific actions taken in response to a wildland fire to implement protection and/or fire use objectives. It allows managers to utilize a full range of responses. It does not lock tactical options to fire type designations. As conditions change, the particular response can change to accomplish the same objective.

area of critical environmental concern - An area which needs special management attention to preserve historic, cultural, or scenic values; to protect fish and wildlife resources or other natural systems or processes; or to protect life and provide safety from natural hazards.

aspect - The direction a slope faces.

big game - Large mammals, such as deer, elk, and antelope that are hunted for sport.

biological diversity - The number and abundance of species found within a common environment. This includes the variety of genes, species, ecosystems, and the ecological processes that connect everything in a common environment.

biological treatment - The use of animals, (e.g. sheep and goats) and insects to control noxious weeds.

browse - Twigs, leaves, and young shoots of trees and shrubs that animals eat. Browse is often used to refer to the shrubs eaten by big game, such as elk and deer.

budget – For IIAA budget analysis purposes, the budget consists of those funds which are (or would be) allocated to the planning unit to cover the costs of the units planned Pre-suppression/initial attack fire management organization that is analyzed. Funds that are used to pay fire's share of indirect overhead and administrative costs should be included.

call when needed (CWN) - A contract used to obtain aircraft for aerial missions under operational control of the BLM. The DOI-Aviation Management Directorate nationally administrates CWN contracts for type I and II helicopters as well as Single Engine Air

Tankers. Vendors are not required to respond unless they accept an offer to provide services and the government may release the aircraft as needed.

canopy - The part of any stand of trees represented by the tree crowns. It usually refers to the uppermost layer of foliage, but it can be used to describe lower layers in a multistoried forest.

categorical exclusion - A category of actions which do not individually or cumulatively have a significant effect on the human environment and which have been found to have no such effect in procedures adopted by a federal agency in implementation of these regulations, and neither an environmental assessment or an environmental impact statement is required.

Category 1 - substantial biological information on file to support the appropriateness of proposing to list as endangered or threatened.

Category 2 - current information indicates that proposing to list as endangered or threatened is possibly appropriate, but substantial biological information is not on file to support an immediate ruling (U.S. Fish and Wildlife Service.)

chemical treatment - The use of pesticides and herbicides to control pests and undesirable plant species.

Clean Air Act - A federal law enacted to ensure that air quality standards are attained and maintained. Initially passed by Congress in 1963, it has been amended several times.

condition class - Condition classes are a function of the degree of departure from historical fire regimes resulting in alterations of key ecosystem components such as species composition, structural stage, stand age, and canopy closure. One or more of the following activities may have caused this departure: fire exclusion, timber harvesting, grazing, introduction and establishment of exotic plant species, insects and disease (introduced or native), or other past management activities.

Class I - The objective of this class is to preserve the existing character of the landscape. This class provides for natural ecological changes; however, it does not preclude very limited management activity. It also would not preclude those activities specifically authorized by the Wilderness Act of 1964 and described in BLM Manual H-8550-1. This is an interim classification until Congress determines which areas are wilderness. Lands designated as wilderness by Congress would continue to be managed under Class I objectives. Lands not designated wilderness would be managed under VRM Class II objectives.

Class II - The objective is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominate natural features of the characteristic landscape.

Class III - The objective is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

Class IV - The objective is to provide for management activities which require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the view and be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements.

contiguous - Continuous, generally used to describe areas of land.

cooperator – In IIAA it is any fire agency, fire department, commercial or other entity that provides initial attack forces to the Planning Unit for dispatch on a planned basis.

cultural resource - The remains of sites, structures, or objects used by people in the past; this can be historical or pre-historic.

default FIL – The lowest Fire Intensity Level at which an initial attack unit will be used (dispatched) by the IIAA under a program option which uses the default FIL dispatch mode. The default FIL may be assigned as a default for all units of a **Producer Type**, or individually set for units on the **Edit Line Item** form.

density - Number of trees in an area, generally measured as trees per acre.

disturbance - Any event, such as forest fire or insect infestations that alter the structure, composition, or functions of an ecosystem.

ecosystem - An arrangement of living and non-living things and the forces that move among them. Living things include plants and animals. Non-living parts of ecosystems may be rocks and minerals. Weather and wildfire are two of the forces that act within ecosystems.

Emergency stabilization and rehabilitation (ESR) – Emergency stabilization actions are initiated within one year of a fire to stabilize and prevent unacceptable damage of natural and cultural resources, minimize threats to life and property resulting from the affects of a fire, and repair/replace/construct physical improvements necessary to prevent degradation of land or resources. Rehabilitation actions are taken within three years of the fire to repair or improve lands that are unlikely to recover to a management-approved condition, and repair or replace minor facilities damaged by fire.

encroachment - The progression of trees from forested areas into grassland or shrub land.

endangered species - A plant or animal that is in danger of extinction throughout all or a significant portion of its range. Endangered species are identified by the Secretary of the Interior in accordance with the Endangered Species Act of 1973.

Environmental Assessment (EA) - A record of the environmental factors involved in a land management action.

Environmental Impact Statement (EIS) - An analysis of site-specific BLM activities used to determine whether such activities have a significant effect on the quality of the human environment, and whether a formal environmental impact statement is required.

exclusive use – A contracts for aircraft services that are solicited and awarded by DOI-Aviation Management Directorate nationally for the BLM for a specific time period (e.g. 30-day, 90-day, etc..)

extended attack - A wildland fire that has not been contained or controlled by initial attack forces and for which more firefighting resources are arriving or being ordered by the initial attack incident commander. Extended attack implies that the complexity level of the incident will increase beyond the capabilities of initial attack incident command.

fauna - The animal life of an area.

Fire Behavior Prediction Models (FBPS) - A set of mathematical equations that can be used to predict certain aspects of fire behavior when provided with an assessment of fuel and environmental conditions.

fire cycle - The average time between fires in a given area.

fire intensity level - A measure of fire behavior used in IIAA (A NFMAS term.) It is based on the calculated flame length, where FIL 1 is 0-2 feet, FIL 2 is 2-4 feet, FIL 3 is 4-6 feet, FIL 4 is 6-8 feet, FIL 5 is 8-12 feet and FIL 6 is greater than 12 feet. The NFDRS Burning Index (BI) is the indicator for the fire danger for dispatching and is used to categorize rate of spread and to assess fire effects. **FIL=BI/10**

fire management - The integration of knowledge of fire protection, prescribed fire, and fire ecology into multiple use plans, decision making, and land management activities. Fire management places fire in perspective with overall land management objectives.

fire management plan (FMP) - Activity plans developed to support and accomplish resource management objectives and applicable land-use decisions authorized in BLM resource management plans. It contains an economic analysis, establishes the basic direction for fire management, identifies priorities for execution, and determines levels of fire resources (personnel, engines, aircraft, and facilities.)

fire management unit (FMU) - Any land management area definable by objectives, management constraints, topographic features, access, values to be protected, political boundaries, fuel types, major fire regimes groups that set it apart from the management characteristics of an adjacent FMU. Fire Management Units are scaleable, and cannot be separated geographically. The FMUs may have dominant management objectives and pre-selected strategies assigned to accomplish these objectives. The development of FMUs should avoid redundancy. Each FMU should be unique as evidenced by management strategies, objectives and attributes.

fire planning unit (FPU) - Describes the geographic planning area. It can include a single or multiple land use plan planning area(s), cross-jurisdictional boundaries including adjacent

BLM office lands, and/or other partner lands. The FPU will be a key component of the new Fire Program Analysis (FPA) software program.

Fire Regime Condition Class (FRCC) - Classes of fire regimes grouped by categories of frequency (expressed as mean fire return interval) and severity. Refers specifically to five groups used in federal policy and planning: 0-35 years, low severity; 0-35 years, stand replacement; 35-100 years, mixed severity; 35-100 years, stand replacement; 200+ years, stand replacement.

fire regime- The characteristics of fire in a given ecosystem, such as the frequency, predictability, intensity, and seasonality of fire.

fire use - The management of naturally ignited wildland fire to accomplish specific pre-stated resource management objectives in predefined geographic areas outlined in approved Fire Management Plans.

fire-adapted – Evolved strategies that allow populations to be maintained on sites where fires commonly occurred.

flora - The plant life of an area.

forage - All browse and non-woody plants that are eaten by wildlife and livestock.

forb - A broadleaf plant that has little or no woody material in it.

fuel – The combustible plant material, both living and dead that is capable of burning in a wildland fire situation.

fuel break – A zone in which fuel quantity has been reduced or altered to provide a position for suppression forces to make a stand against wildfire. Used for suppression safety and fire behavior modification. Fuel breaks may consist of one or a combination of the following: Natural barriers, constructed fuel breaks, manmade barriers. The effectiveness of fuel breaks is improved when strategically located adjacent to areas containing low fuel accumulation (Tons/Acre.) In the long-term fuel breaks are more effective when managed to maintain a low fuel loading. Tools used for fuel break maintenance include mechanical treatment, prescribed burning, and grazing.

fuel model (FM) - Simulated fuel complex for which all fuel descriptors required for the solution of a mathematical rate of spread model have been specified.

fuels management - The treatment of fuels that would otherwise interfere with effective fire management or control. For instance, prescribed fire can reduce the amount of fuels that accumulate on the forest floor before the fuels become so heavy that a natural wildfire in the area would be explosive and impossible to control.

fuels treatment - The rearrangement or disposal of natural or activity fuels to reduce fire hazard.

Geographical Information System (GIS) - Specific actions taken in response to a wildland fire to implement protection and fire use objectives. Formerly known as the appropriate suppression response which consisted of the confine, contain, and control tactical strategies. (NWCG terminology adopted 06/12/97) OR Computer program which consists of layers of files of data which describe components of landscape. The information can be reproduced on a map.

habitat - A place where a plant or animal naturally or normally lives or grows.

historic fire regime (HFR) – Periodicity and pattern of naturally occurring fires in a particular area or vegetative type, described in terms of frequency, biological severity, and area of extent.

initial attack - For the purpose of NFMAS IIAA budget analysis, initial attack is defined as the suppression action that is carried out exclusively by the forces that are planned and used for action on initiating fires as included in the IIAA included items list.

ladder fuels - Vegetation located below the crown level of forest trees which can carry fire from the forest floor to tree crowns. Ladder fuels may be low-growing tree branches, shrubs, or smaller trees.

landscape - An area composed of interacting and inter-connected ecosystems that are repeated because of the geology, landform, soils, climate, biota, and human influences through the area. A landscape is composed of watersheds and smaller ecosystems.

large fire - A fire burning more than a specified area of land e.g., 300 acres. A fire burning with a size and intensity such that its behavior is determined by interaction between its own convection column and weather conditions above the surface.

Management Information System (MIS) - BLM workload measures web based, uses designations of specific tasks to track field office workloads and accomplishments.

mechanical treatment - Treatment of an area by mechanical means, such as contour furrowing, pitting, plowing and seeding, chiseling, scalping, and water spreading.

minimum impact suppression tactics (MIST) – The concept of MIST is to use the minimum amount of force necessary to achieve wildland fire management protection objectives, consistent with land and resource management objective (USDA 1993.)

mitigation - Actions taken to avoid, minimize, or rectify impacts of a land management practice; reducing or eliminating the impact by preservation and maintenance operations.

mosaic - Areas with a variety of plant communities over a landscape, such as areas with trees and areas without trees occurring over a landscape.

most efficient level (MEL) - The fire program (budget and associated program option) that will result in the expected minimum cost + net resource value change. Conceptually, this is the most efficient funding level for the planning unit, and any increase in budget beyond

MEL will have a negative benefit-cost ratio; that is the return in reduced suppression costs and resource losses will not offset the budget increase.

multi-story - A vertical arrangement of three or more canopy layers within the same area.

National Environmental Policy Act (NEPA) – Congress passed NEPA in 1969 to encourage productive and enjoyable harmony between people and their environment. One of the major tenets of NEPA is its emphasis on public disclosure of possible environmental effects of any major action on public lands.

National Fire Danger Rating System (NFDRS) - A uniform fire danger rating system that focuses on the environmental factors that control the moisture content of fuels.

National Fire Management Analysis System (NFMAS) - The analysis process which systematically evaluates fire management programs based on an economic efficiency criterion. NFMAS uses a simulation model to estimate the performance over time of existing and proposed local initial attack organizations and other fire-related activities such as prevention and fuels management. Budget cost, variable suppression costs, and economic consequences of fire on planned resource outputs are all considered in making the efficiency estimate.

National Fire Plan - A planning document that directs the actions of USDA Forest Service and Departments of the Interior agencies in preparing for wildland fires and reduce their impacts on people and resources. The National Fire Plan is based on the five key points of firefighting, rehabilitation and restoration, hazardous fuel reduction, community assistance, and accountability.

National Fire Plan Operations Reporting System (NFPORS) - Web based data system used by federal agencies to list unit projects, project status and general costs.

National Forest Lands - Public lands, generally forest, range, or other wildland, administered by the Forest Service, USDA.

National Historic Preservation Act (NHPA) - The federal law which requires agencies to identify item of cultural and historical significance. An act to establish a program for the preservation of additional historic properties throughout the nation, and for other purposes.

normal year readiness (NYR) - Approximate annual date when individual management units plan to be fire ready. Identified in annual work plan.

noxious weed - According to the Federal Noxious Weed Act (PL 93-629), a weed that causes disease or has other adverse effects on man or his environment and therefore is detrimental to the agriculture and commerce of the United States and to the public health. Identified by designation in Montana.

overstory - The upper canopy layer; the plants below comprise the understory.

Personal Computer Historical Analysis (PCHA) - A personal computer program for processing historical daily weather observation and individual fire report data to produce fire behavior and fire occurrence data for the IIAA.

permitted grazing - Grazing on public lands under the terms of a grazing permit.

precommercial thinning - A felling made in an immature stand to improve the average form of the trees that remain.

prescribed fire - Application of fire (by planned or unplanned ignitions) to fuels in either their natural or modified state, under specified conditions to allow the fire to burn in a predetermined area while producing the fire behavior required to achieve certain management objectives.

prescription - Management practices to accomplish specific land and resource management objectives.

prevention – Activities directed at reducing the number of person-caused fires, including public education, law enforcement, dissemination of information, and the reduction of hazards.

properly function condition (PFC) - Used to describe a vegetation population such as a stand of trees which is healthy and reproducing, and maintaining it.

public land - Land for which title and administration rests with the Bureau of Land Management (BLM.)

Range Improvement Project System (RIPS) - Electronic database for recording all range improvement projects for BLM.

rangeland - Land on which the principle natural plant cover is composed of native grasses, forbs, and shrubs that are valuable as forage for livestock and big game.

record of decision (ROD) - Agency administrators select an alternative that best implements the objectives and constraints for the management of the area.

Remote Automatic Weather System (RAWS) - A weather information management system satellite station that automatically tracks and stores weather information.

rights-of-way - Public lands authorized to be used or occupied pursuant to a right-of-way grant.

riparian ecosystem - The ecosystems around or next to water areas that support unique vegetation and animal communities as a result of the influence of water.

Risk Assessment and Mitigation Strategies Plan (RAMS) – Computer based risk assessment and mitigation model. RAMS assists users in developing the optimum prevention and fuels programs and allows users to prioritize areas within their planning unit,

consider various prevention and/or fuels treatment alternatives and develop the related budgets.

stand replacement - When a stand has been totally modified by some disturbance (fire, insects, disease, logging), and needs to start, or be started, over.

standard landscape assessment - Method of determining characteristics which make up landscape. Means of describing a geographic, area uses GIS.

structure - How the parts of ecosystems are arranged, both horizontally and vertically. Structure might reveal a pattern, or mosaic, or total randomness of vegetation.

suppression - Any act taken to slow, stop, or extinguish a fire. Examples of suppression activities include fireline construction, backfiring, and application of water or chemical fire retardants.

temporary road - Temporary roads are used for a single, short-term use, i.e. to haul timber to developed roads, access to build water developments or conduct other administrative functions, etc.

threatened and endangered species - These species of plants or animals classified as threatened or endangered pursuant to section 4 of the Endangered Species Act. Any species which is in danger of extinction, or is likely to become so within the foreseeable future.

vegetation type - A plant community with distinguishable characteristics.

visual resource management (VRM) -

VRM Class I areas (including all Wilderness and Wilderness Study Areas (WSAs) unless specifically exempted in an RMP) – To preserve the existing character of the landscape. This class provides for natural ecological changes; however, it does not preclude very limited management activity. The level of change to the characteristic landscape should be very low and must not attract attention.

VRM Class II areas - Retaining the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color and texture found in the predominant natural features of the characteristic landscape.

VRM Class III areas – The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

VRM Class IV areas – To provide for management activities which require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the

view and be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance and repeating the basic elements.

wilderness study area (WSA) – A WSA must be managed in a manner so as not to impair suitability for preservation and designation as wilderness. Within WSAs, fuels and vegetation treatment and wildland fire management activities should follow BLM Manual H-8550-1: *Interim Policy for Lands Under Wilderness Review* (USDI 1995.)

wildland fire - Any wildland fire that is not a prescribed fire.

Wildland Fire Implementation Plan (WFIP) - A progressively developed assessment and operational management plan that documents the analysis and selection of strategies and describes the appropriate management response for a wildland fire being managed for resource benefits.

Wildland Fire Situation Analysis (WFSA.) A decision making process in which the agency administrator or representative describes the situation, compares multiple strategic wildland fire management alternatives, evaluates the expected effects of the alternatives, establishes objectives and constraints for the management of the fire, selects the preferred alternative, and documents the decision.

wildland fire use - The management of naturally ignited wildland fires to accomplish specific pre-stated resource management objectives in predefined geographic areas outlined in Fire Management Plans.

wildland urban interface (WUI) - The line, area, or zone, where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuel.

woody draw - A classification of areas, particularly in grassland settings, where an overstory of woody vegetation in small drainages creates habitat for many wildlife species and shade/wind protection and forage for livestock. The vegetation is a result of higher moisture conditions than in the surrounding areas but surface water if any, running thru the areas is generally short term.

Appendix A

Management Constraints from the Fire/Fuels Management Environmental Assessment Plan Amendment for Miles City and the Dakotas

The following management constraints are taken from section 2.5.1.1 and 2.5.3.1 of the Fire/Fuels Management Environmental Assessment Plan Amendment for Miles City and the Dakotas (2003).

2.5.1.1 Protection measures common to both alternatives: These protection measures are based on existing policy, direction, law, and regulation. They are described here to emphasize the portions of policy that are relevant to this proposed action.

1. Air Quality: Prescribed fire will conform with the provisions of state regulations and implementation plans as specified in BLM manual section 9210-Fire Planning and (in Miles City) the Miles City Airshed Group Operating Guide
2. Cultural: Prior to implementing fire projects, the BLM will do an appropriate level of Native American consultation according to the guidance in BLM Manual 8160 and Handbook H-8160-1 to identify potential religious or cultural concerns.
3. Cultural: If Native American human remains are discovered on public lands during fire suppression, rehabilitation, or fuels reduction activities, the BLM will follow procedures identified in the Native American Graves Protection and Repatriation Act (NAGPRA) and 43 CFR part 10. If BLM fire suppression or reclamation activities extend onto private or state land, and burials are discovered, the provisions of the appropriate state burial law will be followed.
4. Cultural: The protective measures that guide the placement of dozer lines and other surface disturbing fire-related activities will be followed unless the authorized officer determines that due to adverse fire behavior, implementation of a particular measure is not feasible and prudent. In those cases, the measure may be waived or modified to address crucial safety issues, i.e., imminent threats to life and/or property. The SHPO will be notified if such measures are waived or modified in accordance with existing agreements or 36 CFR 800. Also, unless critical safety issues prevent a cultural resource inventory from being conducted, the provisions regarding post-fire cultural resource inventory cannot be waived or modified. If inventory is waived or modified by the authorized officer the SHPO will be consulted consistent with existing agreements or 36 CFR 800.
5. Special Status Species (SSS): Under BLM Special Status Species policy (BLM Manual 6840), BLM shall ensure that actions authorized, funded, or carried out by the BLM do not contribute to the need for listing a candidate or BLM sensitive species under the Endangered Species Act.
6. Threatened and Endangered Species: Areas of occupied and/or suitable habitat, important for species expansion and recovery, would be protected from adverse effects resulting from fire/fuels management related activities
7. Wilderness and Wilderness Study Areas (WSAs): Activities in wilderness areas and WSAs, including all fuels management activities, must not impair wilderness values. Inclusion of a WSA in a polygon does not automatically enable all types of treatments and prescribed burning associated with the category to be completed within the WSA. Treatment will not impair, and will in fact enhance, wilderness values. Minimum Tool and Minimum Requirement concepts must be reviewed

8. Visual: In order to ensure that the objectives of each visual resource management class is met, contrast ratings are required for all major projects (prescribed burning, mechanical and chemical pre-treatments) on public lands that fall within VRM Classes I and II, and Class III areas which have high sensitivity levels. Actions must not exceed the VRM objectives established for the management class.

2.5.3.1 Direction for fire management (including both fire suppression and fuels management) to protect other resource values: The following direction would be used when developing and updating field office fire management plans, when responding to wildland fires, and when developing site-specific fuels projects. This direction would not be mandatory during wildland fire suppression if using it would compromise protection of life or property.

9. Aquatic Species (including Special Status Species) and Habitat

Fuels Management

- To provide additional protection of aquatic species beyond Streamside Management Zone (SMZ) boundaries, **Riparian Protection Zones (RPZs)** would be identified to protect the following specific key ecological functions:
 - **water quality**, to a degree that provides for stable and productive riparian and aquatic ecosystems;
 - **stream channel integrity**, channel processes, and the sediment regime (including the elements of timing, volume, and character of sediment input and transport) under which the riparian and aquatic ecosystems developed;
 - **in stream flows** to support healthy riparian and aquatic habitats, the stability and effective function of stream channels, and the ability to route flood discharges;
 - **natural timing and variability** of the water table elevation in meadows and wetlands.
 - **diversity and productivity** of native and desired non-native plant communities in riparian zones.
- The width necessary to protect stream and riparian area structure and function should be determined from watershed and site-specific analysis. Interim RPZ boundaries described below should be considered default boundaries until final boundaries are determined by watershed or site-specific analysis. Final RPZ boundaries may be narrower or wider, depending on local conditions and results of the project specific analysis.
- Interim RPZ boundaries within forested zones would be:
 - Streams, ponds, lakes containing Special Status Fish Species: two site-potential tree heights
 - Other fish-bearing streams: one site-potential tree height
 - Ponds, lakes, and wetlands greater than 1 acre: the RPZ consists of the body of water or wetland and the area to the outer edges of the riparian vegetation, or to the extent of the seasonally saturated soil, or to the extent of moderately and highly unstable areas, or to a distance equal to one site-potential tree height (whichever is greatest)
- Interim RPZ boundaries for non-forested rangeland ecosystems would consist of the body of water or wetland and the area to the outer edges of the riparian vegetation, or to the extent of the seasonally saturated soil, or to the extent of moderately and highly unstable areas, or (in segments where trees are present) to a distance equal to one site-potential tree height (whichever is greatest).
- Fuels treatments could occur within these RPZs; however, riparian values would receive primary management emphasis during fuels treatments.

- All proposed fuels treatments within RPZs should analyze particular risk from wildfire and fuels management projects to isolated, depressed populations in degraded habitats without access to local or regional refugia. Proposed treatments should incorporate specific design features to avoid any further degradation of habitat.
- If RPZ boundaries are narrower than SMZ boundaries, fuels treatments would still comply with applicable state laws and Water Quality/Forestry Best Management Practices that BLM has adopted.

The following conservation measures would be applied to protect Threatened and Endangered fishes:

10. Pallid Sturgeon (Endangered)

- No aerial retardant should be applied within 300 feet of the Yellowstone River below the mouth of the Powder River or within 300 feet of the Upper Missouri River (above Fort Peck Dam).
- Restrict livestock grazing of riparian vegetation, especially cottonwood stands along the Upper Missouri River (above Fort Peck Dam), and Yellowstone River below the mouth of the Powder River, where that vegetation has been recently affected by fire or other catastrophic events (blowdown, ice shear, flood etc.) until successful regeneration of vegetative components occurs.

11. Bull Trout (Threatened)

- Projects shall be designed using the guidance set forth in the “Interim Bull Trout Habitat Conservation Strategy.”

Cultural and Paleontological Guidance

Fire Suppression

12. The appropriate BLM archaeologist, paleontologist, or cultural resource program lead would recommend the following guidance for each fire as appropriate:
13. Fire suppression tactics would limit surface disturbance to protect cultural resource values in designated cultural Areas of Critical Environmental Concern (ACEC), archeological districts, and other areas known or suspected to contain cultural resources, including historic structures and features. Use of earth moving/tillage equipment should be avoided for wildland fire suppression in areas with special designations to protect cultural resources and values, archeological districts, and other areas known to possess cultural resources. The use of heavy equipment and off-road vehicles should be limited to existing roads and trails within these areas during rehabilitation.
14. The aerial application of fire retardant would be restricted over areas that contain petroglyphs and pictographs.
15. Fire camps and fire staging areas should be placed outside and sufficiently distant from known or identified cultural resources. Use of off-road motorized vehicles outside of fire camp and staging areas should be avoided to prevent inadvertent impacts to cultural resources.
16. An intensive cultural resource inventory (Class III) as described in BLM Manual 8110 should be completed on areas disturbed by suppression activities, e.g., fire lines, fire camp areas, and staging areas before starting rehabilitation. Cultural resources discovered in or near disturbed areas should be protected from further damage during rehabilitation.

Where cultural resources have been disturbed by suppression activities stabilization work may be implemented. This may entail a careful return of the berm over the site, seeding, or covering the site with protective mesh and culturally sterile material. These emergency actions should be considered on a case-by-case basis at the discretion of the archaeologist assigned to the fire. Consultation with the SHPO would be done in accordance with existing agreements or 36 CFR 800.

17. A BLM resource advisor and, if feasible, an archaeologist, would be on site during suppression and rehabilitation activities to give guidance and ensure compliance with the guidelines and decisions established to protect cultural resource values. Guidelines should include prohibitions against the collection of artifactual materials from archaeological and historical resources.
18. The archaeologist assigned to the fire would work with the rehabilitation team to ensure that cultural resources, including historic structures and features, are considered during fire suppression restoration actions. Site treatment plans would be prepared for historic properties that have been damaged by fire suppression and require more detailed stabilization efforts. These treatment plans would protect the site from secondary effects of the fire and fire suppression activities.
19. Monitoring of sensitive site areas would be conducted when fire suppression rehabilitation plans are within close proximity to historic properties, or could have an indirect effect on an existing resource.
20. If stabilization/protective measures were employed for cultural resources a report summarizing those actions should be submitted to an appropriate SHPO. The report should include a description of the fire impacts, fire suppression and rehabilitation, and salvage activities. It should also include the number and types of sites affected and stabilized.
21. In accordance with the existing agreements or 36 CFR 800, the SHPO would be notified of a fire emergency and the suppression efforts associated with the emergency. Adjustments to these procedures may be made in response to comments from consulting parties; e.g. the SHPO, either programmatically through existing agreements or on a case-by-case basis where no agreement exists.
22. Surface disturbance should be limited within designated ACECs and formations known to contain significant fossil resources to protect paleontological values. In these areas with designated paleontological resources, the use of heavy equipment and off-road vehicles would be limited to existing roads and trails during rehabilitation.
23. Fire camps and fire staging areas should be placed outside and sufficiently distant from known or identified fossil localities. Use of motorized vehicles outside of fire camp and staging areas in known fossil producing formations should be avoided to prevent inadvertent impacts to fossil resources.
24. Significant fossils that are exposed by suppression activities or would be damaged by rehabilitation work should be recovered by a qualified Paleontologist.

Cultural and Paleontological Guidance

Fuels Management

25. Develop protocol with ND and SD SHPOs similar to that described in IM MT No. 99-032 for Miles City. This would allow for a sample inventory instead of a Class III intensive survey of an entire target area. Until that protocol is developed, prescribed fire projects in ND or SD would require consultation with the appropriate SHPOs to develop

a prescribed fire survey and protection strategy. The inventory strategies developed for these two states should be similar to guidance provided in IM no. MT-99-032.

26. If a class III inventory is used instead of the sample inventory described in IM No. MT 99-032, no additional consultation with SHPO would be required.
27. Where known fossil resources are suspected but unknown and where the area cannot be avoided the following measures would be employed: 1. Conduct an inventory to identify the presence or absence of fossil resources employing a qualified paleontologist, 2. in areas where fossil resources are suspected or have been identified avoid using surface disturbing motorized vehicles, heavy equipment, or hand tools, and 3. advise fire personnel and others to refrain from collecting fossils on public lands.
28. To the extent possible during fuels treatment planning, use a qualified paleontologist to assess the risk of damages and to recommend ways to minimize damage to fossil resources resulting from implementation of the plan.

Terrestrial Wildlife Species (including Special Status Species) and Habitat Direction common to both Wildland Fire Management and Fuels Management

The following conservation measures would be applied to protect Threatened and Endangered terrestrial wildlife species:

29. Interior Least Tern (Endangered)

- No human disturbance within 1/4 mile of least tern nest site from May 15 to August 15;
- No prescribed burning activities within 1 mile upwind of least tern nest sites.
- No helicopter/aircraft activity or aerial retardant application within 1/2 mile of least tern nest sites between May 15 and August 15;
- No prescribed burning activities within 1 mile upwind of nest sites between May 15 and August 15.

30. Whooping Crane (Endangered)

- No human disturbance within 1/2 mile of occupied whooping crane habitat or potential habitat where whooping cranes have been identified within the past three years from April 1 to August 31
- No helicopter/aircraft activity or aerial retardant application within 1/2 mile of occupied whooping crane habitat or potential habitat where whooping cranes have been identified within the past three years from April 1 to August 31.

31. Black-footed Ferret (Endangered)

- No heavy equipment operation off of existing roads within 1/4 mile of prairie dog towns with documented occurrence of black-footed ferret
- No aerial retardant application within 1/4 mile of prairie dog towns with documented occurrence of black-footed ferret
- No surface disturbance (fire line construction) should occur in prairie dog towns with documented occurrence of black-footed ferret.

32. Gray Wolf (Endangered)

- No human disturbance or associated activities within 1 mile of a den or rendezvous site from April 15 to June 30.

33. Bald Eagle (Threatened)

- No human disturbance within ½ mile of bald eagle nests from February 1 through August 15;
- No human disturbance within 1/4 mile of a winter roost from November 1 through March 1 or, if within 1/4 mile, activity should be restricted to a period of 9 am to 3 pm;
- No helicopter/aircraft activity or aerial retardant application within ½ mile of known bald eagle nest sites from January 1 through August 15; or within 1/4 mile of a winter roost from November 1 through March 1;
- No prescribed burning activities within 1 mile upwind of nest sites from January 1 through August 15; or within 1 mile upwind of a winter roost between November 1 and March 1.

34. Piping Plover (Threatened)

- No human disturbance within 1/4 mile of any occupied nest sites from April 1 to July 31
- No prescribed burning within one mile upwind of any occupied nest sites from April 1 to July 31 ;
- No helicopter/aircraft activity or aerial retardant application within ½ mile of piping plover nest sites between April 15 and July 31.

35. Canada Lynx (Threatened)

- Activities shall not cause a greater than 30% temporary loss or 15% permanent loss of suitable habitat in a decade. In addition, 10% of the Lynx Assessment Unit (LAU) shall remain in denning habitat in patches larger than five acres;
- Processes used to reduce fuel levels, prepare sites for planting or for reintroduction of fire shall preserve the majority of large standing dead trees and large woody debris (denning habitat);
- Precommercial thinning or introduction of fire into lynx habitat shall only occur when the forest stand no longer provides snowshoe hare habitat. This occurs when self-pruning processes have eliminated snowshoe hare cover and forage availability.
- Following disturbance such as blowdown, fire, insects, and disease that could contribute to lynx habitat, do not salvage harvest when the affected area is smaller than 5 acres (exceptions would include areas such as developed campgrounds). Where larger areas are affected, retain a minimum of 10% of the affected area per LAU in patches of at least 5 acres;
- Design burn prescriptions to create snowshoe hare habitat (e.g. regeneration of aspen and lodgepole pine);
- Minimize construction of temporary roads, firebreaks, machine lines, etc. on ridges, saddles, or areas that would create permanent travel ways that could facilitate increased access by competitors (e.g. coyote, bobcat);
- Restrict livestock grazing of fire created openings, aspen stands, willow carrs, and other potential lynx habitat until successful regeneration of shrub and tree components occurs.

36. Grizzly Bear (Threatened)

- Within the Recovery Zone, as defined in the Grizzly Bear Recovery Plan (USFWS 1993), any off-road vehicular travel or vehicular travel on restricted roads shall adhere to access standards/direction as provided in local or regional interagency agreements, Biological Opinions, or local Land Use Plans;

- All activities requiring overnight stays or establishment of a base camp shall be limited to fewer than 20 individuals and less than 5 days duration within the Recovery Zone (defined in Grizzly Bear Recover Plan (USFWS 1993));
- Firewood collection within the Recovery Zone (defined in Grizzly Bear Recovery Plan (USFWS 1993)) shall be limited to roadside hazard tree removal, road maintenance, or campground maintenance activities;
- Activities within the Recovery Zone (defined in Grizzly Bear Recover Plan (USFWS 1993)) in Riparian, Meadows, and Stream Corridors including restoration and improvement projects must not occur between April 1 and July 1 or must be completed in one day;
- Within the Recovery Zone (defined in Grizzly Bear Recover Plan (USFWS 1993)) projects that would significantly change the vegetative community should not be implemented in huckleberry producing sites;
- In order to minimize the potential for habituation or human conflict, activities within the Recovery Zone (defined in Grizzly Bear Recover Plan (USFWS 1993)) will adhere to Interagency Grizzly Bear Guidelines or local interagency grizzly bear standards for sanitation measures or storage of potential attractants;
- Within the Recovery Zone (defined in Grizzly Bear Recover Plan (USFWS 1993)) activities will not involve planting or seeding of highly palatable forage species near roads or facilities used by humans.

37. Mountain Plover (Proposed)

- No human disturbance within 1/4 mile of occupied mountain plover nest sites from April 1 to July 31;
- No helicopter/aircraft activity or aerial retardant application within 1/2 mile of occupied mountain plover nest sites;
- No prescribed burning within 1 mile upwind of any occupied mountain plover nest sites from April 1 to July 31.

Vegetation Direction

Wildland Fire Suppression

The following conservation measures would be applied to protect Threatened plant species:

38. Western Prairie Fringed Orchid, Water Howellia, Ute Ladies'-tresses (Threatened)

- All proposed action areas within potential habitat shall be surveyed by a botanically qualified biologist, botanist, or ecologist to determine the presence/absence of the species;
- No action that would potentially affect the species will be taken within suitable habitat if surveys are not completed to determine the presence or absence of the species;
- Areas of occupied habitat within a proposed project area will have a "site specific" no activity buffer established by a qualified botanist, biologist, or ecologist, to protect occupied habitat;
- Best Management Practices should be applied to protect the area from invasive plant species;
- Non-native species should not be used in revegetation of suitable habitat.

Visual Direction
Wildland Fire Suppression

39. The use of heavy equipment and retardant for wildland fire suppression should be avoided in designated VRM Class I and Class II areas unless the impact of the fire would more severely impact the VRM values than the impact of equipment and retardant.
40. Fire rehabilitation of VRM Class I and II areas should be coordinated with a VRM specialist.
41. Fuels management projects should be coordinated with a VRM specialist.

IX. REFERENCES

Montana/Idaho Airshed Group. 2003. Operating Guide. Retrieved May 13, 2004:
http://www.fs.fed.us/rl/fire/nrcc/Smoke_web_pages/OpGuide_presentation.pdf

National Wildfire Coordinating Group. 2000. Wildland and Prescribed Fire Qualification System Guide. PMS 310-1/NFES 1414.

USDA Forest Service and United States Department of the Interior (USDI) BLM. 2004b. Interagency Standards for Fire and Aviation Operations. National Interagency Fire Center. Boise, ID.

USDA Forest Service and USDI BLM. 2003. The Interagency Strategy for the Implementation of the Federal Wildland Fire Management Policy. Washington, D.C.

USDA Forest Service and USDI BLM. 2002b. Interagency Burned Area Emergency Stabilization and Rehabilitation handbook. Washington, D.C. Retrieved May 12, 2004:
<http://fire.r9.fws.gov/ifcc/Esr/handbook>.

USDA Forest Service and USDI BLM. 2002. A Collaborative Approach for Reducing Wildland Fire Risk to Communities and the Environment: 10-year Comprehensive Strategy Implementation Plan. Washington, D.C. Retrieved May 12, 2004:
<http://www.fireplan.gov/reports/11-23-en.pdf>.

USDA Forest Service and USDI BLM. 2001. Review and update of the 1995 Federal Wildland Fire Management Policy. National Interagency Fire Center. Boise, ID.

USDA Forest Service and USDI BLM. 2000. National Fire Plan. Retrieved June 6, 2003, from <http://www.fireplan.gov>.

USDA Forest Service and USDI BLM. 1995. Federal Wildland Fire Management Policy. National Interagency Fire Center. Boise, ID.

USDI BLM. 2000. Prescribed Fire Management Handbook, H-9214-1. BLM State Office. Boise, ID.

USDI BLM, Montana State Office Record of Decision, Standards for Rangeland Health and Guidelines for Livestock Grazing Management for Montana, North Dakota and South Dakota. August 1997.

USDI, BLM, Montana State Office Record of Decision, Off-highway Vehicle Environmental Impact Statement and Proposed Plan Amendment for Montana, North Dakota and South Dakota. June 2003.

USDI, BLM, Billings Field Office, Miles City Field Office, and South Dakota Field Office, Areas of Critical Environmental Concern, Decision Record and Approved Amendment of the Billings, Powder River and South Dakota Resource Management Plans. March 1999.

Fire Regime Condition Class Guidebook. Fire Regime Condition Class Version 1.0.5. April 14, 2004.

USDI, BLM, Miles City District Office, Big Dry Resource Area. Big Dry Resource Management Plan/Environmental Impact Statement. February 1995.

Powder River Resource Area Resource Management Plan, Miles City District. December 1984.